

## Letter to the Editor

# The diagnostic criteria for healthcare-associated infections in China should be urgently upgraded

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*To the Editor*—The prevention and control efforts for healthcare-associated infections (HAIs) have made remarkable progress in China over the past 20 years since the outbreak of SARS in China.<sup>1</sup> Laws, health standards, and hospital regulations related to HAIs control have been considerably improved and refined.<sup>2–5</sup> However, the current diagnostic criteria for HAIs are outdated and are no longer suitable for present circumstances. They were established in 2001<sup>6</sup> by the former Ministry of Health of China and were derived from the National Nosocomial Infections Surveillance System (NNISS), of the United States. Notably, the diagnostic criteria for HAIs in the United States have been upgraded >20 times; however, the diagnostic criteria in China have not been revised for 20 years. The current diagnostic criteria for HAIs in China have the following limitations:

- (1) Most of the diagnostic criteria primarily focus on bacterial and fungal infections, making them unsuitable for addressing other pathogens, such as viruses. For example, the diagnostic criteria for lower respiratory tract infections emphasize leukocytosis. In recent years, most of the HAIs caused by emerging pathogens have been viral pneumonia. Furthermore, diagnostic criteria for pantropic virus infections should not involve a specific infection site, similar to criteria for bacteria and fungi.
- (2) The present diagnostic criteria in China do not include the concept of a “repeat infection timeframe.” When a patient is admitted to the hospital with an existing infection, it becomes challenging to determine HAIs in the same sites. Similarly, there is no clear guidance on how to determine the number of hospital infections when multiple repeated infections occur.
- (3) Additionally, the logical relationship between certain diagnostic criteria items remains unclear. It is uncertain whether they need to be present simultaneously or if meeting some of them is sufficient. For example, in the case of respiratory tract infections, such as cough, expectoration, and pulmonary rales, it is not specified whether all these symptoms must co-occur or if the presence of any one of them would qualify.
- (4) The current diagnostic criteria lack specific items for conditions such as central-catheter-related bloodstream infections, ventilator-associated pneumonia, and catheter-related urinary tract infections. Additionally, there are no established diagnostic criteria for infections in specific populations. For example,

because of the unique physiological state of newborns, some clinical manifestations are highly atypical, making adult diagnostic criteria inappropriate. Furthermore, diagnostic criteria remain unclear for infectious diseases with a definite incubation period, in which patients have a history of exposure to the disease in the hospital but develop symptoms in the community, surpassing the average incubation period.

- (5) How can the site of infection be determined in such cases? Moreover, for certain immunodeficient patients, such as those with leukemia, organ transplant, or agranulocytosis, who present with fever but no identifiable infection site, how should HAIs and their infection sites be determined?
- (6) Furthermore, some concepts in the criteria appear outdated. For example, latent infections activated by diagnostic and therapeutic measures are no longer considered HAIs by the US CDC (eg, herpes simplex and latent tuberculosis) but are still considered HAIs in China.

Updated definitions for HAI surveillance in China are urgently needed. More accurate identification and reporting of HAIs would allow individual hospitals and the country to better understand the burden of these infections and to identify needs and opportunities for their prevention. Timely and accurate data are needed to identify problems and shortcomings, to make timely refinement and optimization, and to improve the quality of medical care.

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